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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,473	12/21/2001	Assaf Govari	BIO-122	5451

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EXAMINER	
MANTIS MERCADER, ELENI M	
ART UNIT	**PAPER NUMBER**
3737	4

DATE MAILED: 02/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/029,473	GOVARI, ASSAF
	Examiner	Art Unit
	Eleni Mantis Mercader	3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-77 of copending Application No. 10/313,702. Although the conflicting claims are not identical, they are not patentably distinct from each other because they represent alternate variations and groupings.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application No. 10/173,298. Although the conflicting claims are not identical, they are not patentably distinct from each other because they represent alternate variations and groupings.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Claims 1-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-27 of copending Application No. 10/173,197. Although the conflicting claims are not identical, they are not patentably distinct from each other because they represent alternate variations and groupings.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 1-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. 10/173,339. Although the conflicting claims are not identical, they are not patentably distinct from each other because they represent alternate variations and groupings.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fabian'095 in view of Schneider'043 and Brodie'545.

Fabian'095 teaches all the elements of the current invention including an apparatus for tracking an object, comprising:

a plurality of field generators, adapted to generate electromagnetic fields at different, respective frequencies in a vicinity of the object, while the one or more field generators are placed outside the body (see col. 5, lines 37-44 and see col. 7, lines 45-47);

a wireless transponder, fixed to the object and wherein the transponder is adapted to be inserted, together with the object, into a body of a subject (see col. 3, lines 66-68, referring to the marker 18 being placed on a surgical implement such as a sponge and see col. 4, lines 20-34; referring to the marker being an LRC marker circuit, thereby wireless) and wherein the object could be a surgical instrument (see Figure 6b);

the transponder comprising:

at least one sensor coil, coupled so that an electrical current flows in the at least one sensor coil responsive to the electromagnetic fields (see col. 5, lines 25-26; referring to the printed circuit coil).

While Fabian'095 does not teach a control circuit coupled to the at least one sensor coil so as to generate an output signal indicative of the current and wherein the control circuit is adapted to generate the output signal so as to indicate a phase of the current flowing in the at least one sensor coil, relative to a phase of the electromagnetic fields, Fabian'095 does teach that the marker has a signal identity characterized by phase/lag lead and when the ac field is removed the circuit exhibits a ring-down which is detectable and indicative of its presence (see col. 5, lines 30-63). Therefore, the circuit as taught by Fabian'095 is a functional equivalent of the combination of the sensor coil and the control coil, in that it provides the same end result of providing a response to the interrogation field, which is detectable and indicative of its presence.

Fabian'095 also teaches a signal receiver to determine the presence of the object (see col. 5, lines 44-47).

Fabian'095 does not teach the determination of the position coordinates of the surgical implement. In the same field of endeavor, Schneider'043 teaches the use of electromagnetic interrogation to accurately determine the remote position of the surgical probe of interest (see col. 4, lines 42-63). It would have been obvious to one skilled in the art at the time that the invention was made to have modified Fabian'095 and incorporated the teachings of Schneider'043 in order to determine the position of the surgical instrument or implement of interest in relatively non-invasive procedures where there is no open wound or direct plain view by the surgeons but rather an insert able instrument such as a catheter or a probe in the patient wherein its position needs to be determined for guiding purposes as less invasive procedures become more prominent.

Fabian'095 in view of Schneider'043, do not teach the use of a power coil, coupled to receive the RF driving field and to convey electrical energy from the driving field to the control circuit, and further coupled to transmit the output signal generated by the control circuit.

In the same field of endeavor, Brodie'545 teach the use of a transponder having a power coil, coupled to receive the RF driving field and to convey electrical energy from the driving field to the control circuit, and further coupled to transmit the output signal generated by the control circuit (see col. 6, lines 12-36).

It would have been obvious to one skilled in the art at the time that the invention was made to have modified Fabian'095 in view of Schneider'043 and incorporated the teachings of

Brodie'545 by using a low power wireless transponder in an electromagnetic interrogation system, in order to provide a simple but reliable communication link of the position of the object of interest which conserves power and reduces possibility of transmission error (see for motivation to combine col. 2, lines 18-23).

Furthermore, it would have been obvious to one skilled in the art at the time that the invention was made to have placed these transponders at any implement of interest used during surgical procedures such as probes or implants in order to localize them through out the surgical procedure.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Knapp et al.'578 teach a temporary implant with transponder and methods for locating and identifying.

Seal'438 teaches a system and method for locating radio frequency identification tags using three-phase antenna.

Watters et al.'029 teach sensor devices for structural health monitoring.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eleni Mantis Mercader whose telephone number is 703 308-0899. The examiner can normally be reached on Mon. - Fri., 8:00 a.m.-6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis Ruhl can be reached on 703 308-2262. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eleni Mantis Mercader
Primary Examiner
Art Unit 3737

EMM